

ABSTRACT

Disclosed are a welding device of a fuel tank for vehicles, which welds flanges of upper and lower panels of the fuel tank together by pressing and melting using a laser, and a welding method thereof. The welding device includes a feed unit for holding upper and lower panels of the fuel tank provided with flanges formed at edges thereof under the condition that the flanges are stacked, and for transferring the upper and lower panels in a horizontal direction; a pressure unit for pressing the flanges of the upper and lower panels, transferred by the feed unit, at front and rear portions of at front and rear portions, and for guiding the transfer of the upper and lower panels; and a laser beam generator perpendicularly separated from central portions of the flanges pressed by the pressure unit by a designated interval, for irradiating a laser beam to the upper and lower panels so that the flanges of the upper and lower panels are fusion-welded together by using heat generated from the irradiated laser beam. The welding device employing laser beam welding allows a heat source not to contact a basic material of the fuel tank, thus not requiring replacement of electrodes and reducing the cost of production. Further, the welding device allows the flanges to be welded by sequentially pressing and melting the flanges, thus improving weldability.